

1. (New) A method of producing a smoking article with reduced sidestream smoke and increased perceived mildness during smoking comprising:

using for the tobacco rod of the article shredded tobacco and shredded reconstituted tobacco sheet containing activated carbon particles; and

using as the wrapper of the smoking article a material having a permeability of 20 CORESTA or greater.

2. (New) A method according to Claim 1 wherein the activated carbon particles are of vegetable origin.

3. (New) A method according to Claim 2 wherein the vegetable origin is coconut.

4. (New) A method according to Claim 3 wherein there is a preferential reduction in the aldehyde content of mainstream smoke when said article is smoked.

5. (New) A method according to Claim 1 wherein there is a preferential reduction in the aldehyde content of mainstream smoke when said article is smoked.

6. (New) A method according to Claim 5 wherein the acrolein and butyraldehydes content of mainstream smoke is reduced.

7. (New) A method according to Claim 1 wherein the acrolein and butyraldehydes content

of mainstream smoke is reduced.

8. (New) A method according to Claim 7 wherein there is a reduction in the ketone content of mainstream smoke when said article is smoked.

9. (New) A method according to Claim 1 wherein there is a reduction in the ketone content of mainstream smoke when said article is smoked.

10. (New) A method according to claim 9 wherein the step of using as the wrapper of the smoking article a material having a permeability of 20 CORESTA or greater consists of using a material having a permeability selected from the group consisting of 25 CORESTA, 50 CORESTA, 80 CORESTA and 180 CORESTA.

11. (New) A method according to claim 1 wherein the step of using as the wrapper of the smoking article a material having a permeability of 20 CORESTA or greater consists of using a material having a permeability selected from the group consisting of 25 CORESTA, 50 CORESTA, 80 CORESTA and 180 CORESTA.

12. (New) A method of producing a smoking article with reduced sidestream smoke and increased perceived mildness during smoking comprising:

using for the tobacco rod of the article shredded tobacco and shredded reconstituted tobacco sheet containing activated carbon particles;

using as the wrapper of the smoking article a material having a permeability of 20 CORESTA or greater; and

hand-rolling the smoking article.

13. (New) A method according to Claim 12 wherein the activated carbon particles are of vegetable origin.

14. (New) A method according to Claim 13 wherein the vegetable origin is coconut.

15. (New) A method according to Claim 14 wherein there is a preferential reduction in the aldehyde content of mainstream smoke when said article is smoked.

16. (New) A method according to Claim 12 wherein there is a preferential reduction in the aldehyde content of mainstream smoke when said article is smoked.

17. (New) A method according to Claim 16 wherein the acrolein and butyraldehydes content of mainstream smoke is reduced.

18. (New) A method according to Claim 12 wherein the acrolein and butyraldehydes content of mainstream smoke is reduced.

19. (New) A method according to Claim 18 wherein there is a reduction in the ketone content

of mainstream smoke when said article is smoked.

20. (New) A method according to Claim 12 wherein there is a reduction in the ketone content of mainstream smoke when said article is smoked.

21. (New) A method according to claim 20 wherein the step of using as the wrapper of the smoking article a material having a permeability of 20 CORESTA or greater consists of using a material having a permeability selected from the group consisting of 25 CORESTA, 50 CORESTA, 80 CORESTA and 180 CORESTA.

22. (New) A method according to claim 12 wherein the step of using as the wrapper of the smoking article a material having a permeability of 20 CORESTA or greater consists of using a material having a permeability selected from the group consisting of 25 CORESTA, 50 CORESTA, 80 CORESTA and 180 CORESTA.

TABLE 1

VAPOUR PHASE ANALYSIS, RESULTS SUMMARY

(Non-ISO 4387 conditions)

| Component | Relative Peak Area | | | | Test as % of Control |
|---------------------|--------------------|-----|------|-----|----------------------------|
| | Control | | Test | | |
| | Mean | RSD | Mean | RSD | |
| Isoprene | 30.8 | 3 | 30.6 | 4 | 100 |
| Limonene | 2.3 | 33 | 2.6 | 17 | 114 |
| Benzene | 16.9 | 5 | 16.5 | 3 | 97 |
| Toluene | 26.7 | 9 | 27.3 | 4 | 102 |
| Ethylbenzene | 4.1 | 18 | 4.5 | 8 | 108 |
| m-+p-Xylene | 6.0 | 19 | 6.7 | 8 | 112 |
| o-Xylene | 1.4 | 21 | 1.6 | 9 | 112 |
| Styrene | 1.5 | 28 | 1.7 | 14 | 112 |
| Acetaldehyde | 9.4 | 4 | 9.3 | 3 | 98 |
| Propionaldehyde | 2.6 | 7 | 2.5 | 7 | 97 |
| Acrolein | 3.5 | 4 | 3.2 | 5 | 92 |
| n-Butyraldehyde | 0.48 | 5 | 0.44 | 4 | 91 |
| iso-Butyraldehyde | 1.3 | 4 | 1.2 | 4 | 91 |
| Crotonaldehyde | 2.6 | 9 | 2.5 | 6 | 98 |
| 2-Furaldehyde | 1.5 | 37 | 1.8 | 20 | 114 |
| Acetone | 110.2 | 4 | 99.0 | 4 | 90 |
| Methylethylketone | 29.5 | 5 | 26.8 | 4 | 91 |
| 3-Methyl-2-butanone | 1.6 | 7 | 1.5 | 5 | 95 |
| Diacetyl | 55.1 | 5 | 50.2 | 3 | 91 |
| 2-Pentanone | 0.27 | 6 | 0.25 | 4 | 91 |
| 2,3-Pentanedione | 3.3 | 9 | 3.2 | 5 | 95 |
| Cyclopentanone | 2.2 | 18 | 2.2 | 18 | 101 |
| Furan | 5.7 | 3 | 5.4 | 4 | 95 |
| 2-Methylfuran | 3.9 | 4 | 3.9 | 3 | 99 |
| 2,5-Dimethylfuran | 6.3 | 6 | 6.4 | 3 | 101 |
| Acetonitrile | 12.9 | 6 | 12.6 | 5 | 98 |
| Propionitrile | 2.5 | 7 | 2.5 | 4 | 98 |
| n-Butyronitrile | 2.5 | 8 | 2.5 | 12 | 102 |
| iso-Butyronitrile | 1.1 | 7 | 1.1 | 5 | 96 |
| Methacrylonitrile | 0.79 | 4 | 0.80 | 5 | 102 |
| Pyridine | 1.3 | 43 | 1.5 | 20 | 115 |
| 1-Methylpyrrole | 1.4 | 12 | 1.5 | 6 | 107 |
| Methyldisulphide | 0.62 | 8 | 0.56 | 8 | 91 |
| Thiophene | 0.19 | 6 | 0.19 | 4 | 98 |
| Replicates | 12 | | 11 | | |

Highlighted values are statistically significantly different at a 95% confidence limit
(Student-t Test, two-tail)

TABLE 2

SEMIVOLATILES ANALYSIS, RESULTS SUMMARY

| Component | μg/CIGARETTE | | | | Test as % of Control |
|----------------------------|--------------|-----|-------|-----|----------------------------|
| | Control | | Test | | |
| | Mean | RSD | Mean | RSD | |
| Limonene | 21.9 | 13 | 20.8 | 10 | 95 |
| Naphthalene | 2.0 | 3 | 1.9 | 5 | 95 |
| 1-Methylnaphthalene | 1.1 | 3 | 1.1 | 5 | 99 |
| 2-Methylnaphthalene | 1.6 | 6 | 1.6 | 4 | 99 |
| Neophytadiene | 127.2 | 7 | 108.8 | 3 | 85 |
| Myosmine | 9.3 | 4 | 10.1 | 3 | 109 |
| Pyrrole | 11.3 | 6 | 9.6 | 6 | 85 |
| 2-Acetylpyrrole | 3.9 | 5 | 3.6 | 4 | 92 |
| Indole | 9.8 | 3 | 9.0 | 4 | 91 |
| 2-Furaldehyde | 51.1 | 5 | 41.8 | 5 | 82 |
| 2-Acetylfuran | 8.6 | 9 | 7.2 | 4 | 83 |
| 2-Furanmethanol | 43.4 | 7 | 37.2 | 7 | 86 |
| 5-Methyl-2-furfural | 25.9 | 9 | 22.6 | 6 | 87 |
| 5-Hydroxymethyl-2-furfural | 118.7 | 3 | 105.4 | 4 | 89 |
| α-Angelicalactone | 23.0 | 7 | 19.4 | 13 | 84 |
| Phenol | 79.5 | 4 | 71.9 | 4 | 90 |
| o-Cresol | 17.3 | 4 | 14.9 | 3 | 86 |
| p-Cresol | 27.5 | 4 | 24.6 | 4 | 89 |
| m-Cresol | 12.0 | 3 | 10.5 | 4 | 88 |
| 2,3,6-Trimethylphenol | 0.6 | 15 | 0.5 | 6 | 84 |
| Pyridine | 13.0 | 14 | 13.2 | 7 | 102 |
| Triacetin | n/d | | n/d | | |
| TEGDA | n/d | | n/d | | |
| Propan-1,2-diol | 126.6 | 69 | 85.3 | 43 | 67 |
| Puffs/cig: | 9.0 | 2 | 8.9 | 1 | 98 |
| TPM (mg/cig): | 17.9 | 3 | 15.5 | 3 | 87 |
| Replicates | 12 | | 12 | | |

n/d - not detected

Detection limits: Triacetin and TEGDA $1\mu\text{g/cigarette}$

Highlighted values are statistically significantly different at a 95% confidence limit
(Student-t Test, two-tail)

TABLE 3

Sidestream measurements

| | SAMPLE | NFDPM (mg/cig) | % REDUCTION | NICOTINE (mg/cig) | % REDUCTION | CO (mg/cig) | CO ₂ (mg/cig) |
|-------------|---------|-------------------|----------------|----------------------|----------------|----------------|-----------------------------|
| 25 CORESTA | CONTROL | 30.1 | - | 7.00 | - | 76.3 | 634 |
| | TEST | 25.5 | 15.3 | 5.74 | 18.0 | 80.5 | 626 |
| 50 CORESTA | CONTROL | 32.5 | - | 6.55 | - | 70.6 | 612 |
| | TEST | 28.4 | 12.6 | 6.07 | 7.3 | 76.1 | 682 |
| 80 CORESTA | CONTROL | 29.1 | - | 7.09 | - | 81.9 | 629 |
| | TEST | 27.5 | 5.5 | 6.21 | 12.4 | 74.1 | 672 |
| 180 CORESTA | CONTROL | 33.9 | - | 7.03 | - | 77.6 | 630 |
| | TEST | 27.5 | 18.9 | 6.07 | 13.7 | 73.6 | 653 |